

IN THE DRAWINGS

Please replace Figs. 4(B), 7-15 and 16(B) currently on file with the substitute Figs. 4(B), 7-15 and 16(B) enclosed herewith.

REMARKS

The above amendments to the above-captioned application along with the following remarks are being submitted as a full and complete response to the Office Action dated May 31, 2007. In view of the above amendments and the following remarks, the Examiner is respectfully requested to give due reconsideration to this application, to indicate the allowability of the claims, and to pass this case to issue.

Status of the Claims

As outlined above, claims 71-82 and 141-150 stand for consideration in this application, wherein claims 71-74, 76, and 81-82 are being amended. Claims 83-140 stand withdrawn from consideration in this application. In addition, new claims 141-150 are hereby submitted for consideration.

Additional Amendments

The drawings are being amended to correct formal errors. All amendments to the application are fully supported therein, including page 12, lines 12-17 of the specification. Applicants hereby submit that no new matter is being introduced into the application through the submission of this response.

Formal Objections

Drawings

The drawings were objected to on the ground of informalities and for failing to comply with 37 CFR §1.83(a).

Regarding to Fig. 4B, the terms “WORD LINE WL” and “BIT LINE BL” are being added in Fig. 4B. Regarding to Figs. 7-15 and 16(B), all the shadings in Figs. 7-15 are being removed. Applicants respectfully submit that Figs. 4B, 7-15 and 16(B) now comply with 37 CFR §1.83(a). Accordingly, withdrawal of the objection is respectfully requested.

Formal Rejections

Claims 71-82 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Claims 71-73 and 82 are being amended so as to meet the requirements under 35 U.S.C. §112, second paragraph. Accordingly, withdrawal of the rejections of claims 71-82 is respectfully requested.

Prior Art Rejections

35 U.S.C. §102(b) Rejections

Claims 71-82 were rejected under 35 U.S.C. §102(b) as being anticipated by Noguchi et al. (U.S. Pat. Publication No. 2003/0013843). Applicants respectfully traverse these rejections for the reasons set forth below.

According to the M.P.E.P. §2131, a claim is anticipated under 35 U.S.C. §102 (a), (b), and (e) only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.

Claim 71

Claim 71 as amended recites that a spin transistor comprises a spin injector for injecting spin-polarized hot carriers by a spin-filter effect, the spin injector including an emitter and a spin analyzer for selecting the thus injected spin-polarized hot carriers passing through a base by the spin-filter effect, the spin analyzer including an corrector.

In contrast, Noguchi merely shows the structure of a TMR memory cell which comprises a first barrier metal layer 203, a first ferromagnetic film 204, a nonmagnetic insulating film 205, a second ferromagnetic film 206, and a second barrier metal layer 207 in order (Fig. 34A-34C, col. 37, line 9 – col. line 58). Noguchi does not show or suggest that a spin injector for injecting spin-polarized hot carriers by a spin-filter effect includes an emitter and a spin analyzer for selecting the thus injected spin-polarized hot carriers passing through a base by the spin-filter effect includes an corrector.

Therefore, Noguchi does not show every element recited in claim 1. Accordingly, claim 1 is not anticipated by Noguchi.

Claim 81

Claim 81 has substantially the same features as those of claim 71, at least with respect to a spin transistor comprising a spin injector for injecting spin-polarized hot carriers by a spin-filter effect, the spin injector including an emitter and a spin analyzer for selecting the

thus injected spin-polarized hot carriers passing through a base by the spin-filter effect, the spin analyzer including an corrector.

As such, the arguments set forth above are equally applicable here. Claim 71 being allowable, claim 81 must also be allowable.

Claims 72-80, 82, 141-150

As to dependent claims 72-80 and 82, and new dependent claims 141-150, the arguments set forth above with respect to independent claims 71 and 81 are equally applicable here. The corresponding base claim being allowable, claims 72-80, 82, and 141-150 must also be allowable.

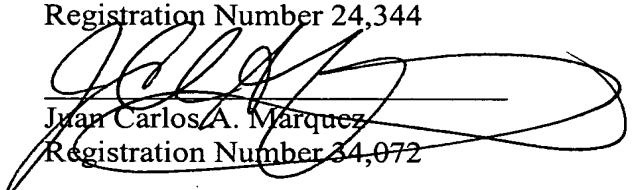
Conclusion

In light of the Amendments and Remarks, Applicants respectfully request early and favorable action with regard to the present application, and a Notice of Allowance for all pending claims is earnestly solicited.

Favorable reconsideration of this application as amended is respectfully solicited. Should there be any outstanding issues requiring discussion that would further the prosecution and allowance of the above-captioned application, the Examiner is invited to contact the Applicants' undersigned representative at the address and phone number indicated below.

Respectfully submitted,

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